

# PATENT COOPERATION TREATY

# PCT

From the INTERNATIONAL SEARCHING AUTHORITY

To:

MEYERTONS, HOOD, KIVLIN, KOWERT  
& GOETZEL, P.C.  
Attn. MEYERTONS, Eric B.  
P.O. Box 398  
Austin, TX 78767-0398  
UNITED STATES OF AMERICA

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT AND  
THE WRITTEN OPINION OF THE INTERNATIONAL  
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

|   |  |
|---|--|
| Applicant's or agent's file reference<br>5943-00500 | Date of mailing<br>(day/month/year) 11/04/2005           |
| International application No.<br>PCT/US2004/025090  | International filing date<br>(day/month/year) 04/08/2004 |
| Applicant<br><br>GORDON, Charles                    |  |

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

**For more detailed instructions,** see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

**4. Reminders**


Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until **30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

|  |   |
|--|---|
| Name and mailing address of the International Searching Authority<br> European Patent Office, P.B. 5818 Patentlaan 2<br>NL-2280 HV Rijswijk<br>Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,<br>Fax: (+31-70) 340-3016 | Authorized officer<br><br>Peggy Frenzel |
|--|---|

**Docketed**  
**APR 14 2005**

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/025090

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 A61F2/44 A61F2/30

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.                            |
|------------|---|--|
| A          | US 5 782 832 A (SHIKHMAN OLEG ET AL)<br>21 July 1998 (1998-07-21)<br><br>figures 21-24<br>column 8, line 8 - line 47<br>-----           | 1,2,8,9,<br>11,14,<br>17-19,<br>38,48,<br>51,85  |
| A          | US 5 314 477 A (MARNAY THIERRY)<br>24 May 1994 (1994-05-24)<br><br>figures 1-3<br>column 4, line 63 - column 5, line 23<br>-----<br>-/- | 1,4,5,<br>11,12,<br>19,38,<br>48,49,<br>51,85,92 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

24 November 2004

Date of mailing of the international search report

11. 04. 2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Stach, R

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/025090

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages            | Relevant to claim No.                         |
|------------|---|---|
| A          | US 6 102 950 A (VACCARO ALEX)<br>15 August 2000 (2000-08-15)<br><br>claim 1; figures<br>----- | 1-6,9,<br>11,14,<br>19,38,<br>48,51,<br>85,92 |
| A          | US 6 562 074 B2 (FALLIN T WADE ET AL)<br>13 May 2003 (2003-05-13)<br><br>figures<br>-----     | 1,2,14,<br>19,38,<br>51,85                    |

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

To:

see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2004/025090

International filing date (day/month/year)  
04.08.2004

Priority date (day/month/year)  
05.08.2003

International Patent Classification (IPC) or both national classification and IPC  
A61F2/44, A61F2/30

Applicant  
GORDON, Charles

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1 (a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office - Gitschiner Str. 103  
D-10958 Berlin  
Tel. +49 30 25901 - 0  
Fax: +49 30 25901 - 840

Authorized Officer

Stach, R

Telephone No. +49 30 25901-551



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/025090

---

**Box No. I Basis of the opinion**

---

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

---

**Box No. IV Lack of unity of invention**

---

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- ☐ paid additional fees.
  - ☐ paid additional fees under protest.
  - ☒ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
  - ☒ not complied with for the following reasons:  
**see separate sheet**
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
  - ☒ the parts relating to claims Nos. 1-23, 38-53, 85-94

---

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

---

1. Statement

|                               |             |                    |
|-------------------------------|-------------|--------------------|
| Novelty (N)                   | Yes: Claims | 1-23, 38-53, 85-94 |
|                               | No: Claims  |                    |
| Inventive step (IS)           | Yes: Claims | 1-23, 38-53, 85-94 |
|                               | No: Claims  |                    |
| Industrial applicability (IA) | Yes: Claims | 1-23, 38-53, 85-94 |
|                               | No: Claims  |                    |

2. Citations and explanations

**see separate sheet**

Neither the PCT nor the PCT guidelines provide a legal basis for further invitations to pay further additional search fees (W17/00, point 11 and W1/97, points 11-16).

**Re Item V.**

- 1 The following documents are referred to in this communication:  
D1 : US 5 782 832 A (SHIKHMAN OLEG ET AL) 21 July 1998 (1998-07-21)  
D2 : US 5 314 477 A (MARNAY THIERRY) 24 May 1994 (1994-05-24)  
D3 : US 6 102 950 A (VACCARO ALEX) 15 August 2000 (2000-08-15)  
D4 : US 6 562 074 B1 (FALLIN T WADE ET AL) 13 May 2003 (2003-05-13)
  
- 2 Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parenthesis applying to this document):  
(see the figures 21-14 and column 8, lines 8-47):

An expandable intervertebral implant (400) comprising:  
a lower body (404) having an inferior surface (408) and a superior surface, the superior surface having an upwardly projecting wall forming a channel thereupon, the wall having an opening;  
an upper body (402) located above the lower body, having a superior surface (406), the upper body being in contact with the lower body prior to expansion of the expandable intervertebral implant;  
and a means for expansion (412) capable of being inserted through the opening in the wall on the lower body.

From this, the subject-matter of independent claim 1 differs in that:

the expandable intervertebral implant comprises a joint insert having an inferior surface and a superior articulation surface, the joint insert residing within the channel on the lower body;  
such that, upon insertion of the expansion means, the joint insert is lifted above the channel causing the superior articulation surface of the joint insert to articulate with

an inferior articulation surface of the upper body.

- 2.1 The subject-matter of claim 1 is therefore novel (Article 33(2) PCT).  
The problem to be solved by the present invention may be regarded as:  
increasing the degree of possible rotation of the upper body relative to the lower body  
and avoiding to insert the joint insert between upper and lower body during surgery  
within the intervertebral space thereby reducing the amount of necessary spreading  
of the vertebrae relative to each other.
- 2.2 The solution to this problem proposed in claim 1 of the present application is  
considered as involving an inventive step (Article 33(3) PCT) since this solution is not  
obvious and none of the documents cited in the search report hints to such a  
solution.
- 2.3 Claims 2-23 are dependent on claim 1 and as such also meet the requirements of the  
PCT with respect to novelty and inventive step.
- 3 The same argumentation as for claim 1 applies to independent claims 38, 51 and 85  
since the subject matter of each of these claims differs from the intervertebral implant  
disclosed in D1 in the same technical features as mentioned under point 2.1 for claim  
1. The subject-matter of these claims is therefore novel (Article 33(2) PCT) and  
considered as involving an inventive step (Article 33(3) PCT).
- 3.1 Claims 39-50, 52, 53 and 85 are dependent on these claims and as such also meet  
the requirements of the PCT with respect to novelty and inventive step.